

ABSTRACT OF THE DISCLOSURE

A hybrid clean-energy power-supply framework integrates a fuel cell, solar cell, and wind energy, applies a max power tracking rule, raises the output power of a solar cell and wind energy to supply a power load and transfer the surplus electrical energy to a water-electrolyzing apparatus for producing hydrogen and oxygen, and provides a fuel for a fuel cell power generating system. Furthermore, the present invention utilizes features of each clean-energy power generating system, depends on the powerful calculation capacity of a central processing unit to monitor and dispatch each power generation and supply system, and thus ensures the reliability of supply power and reduces the power generation cost. Such a framework can selectively grid-connect with the utility power or run as a stand-alone power supply system and has a mechanism for preventing the island effect.